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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/920,182

Applicant(s)

LHILA ET AL.

Examiner

Hai Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Objections

1. Claims 1-22 are objected to because of the following informalities: the phrase "by weight" should be added right after a "%" sign to clarify the concentration of each component in the composition. It is unclear whether the amount of each component in the adhesive tape is defined as % by weight or % by volume. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136). A pressure sensitive adhesive of Everaerts corresponds to a acrylic foam-like backing layer of the claimed invention. Everaerts discloses *the core layer comprising an acrylic copolymer which may incorporate similar or dissimilar acrylic monomers having similar or different additives from those acrylic copolymers contained in the adhesive layer. The core layer comprises about 80 parts or more of an alkyl acrylate monomer, and up to about 20 parts of a copolymerizable modifier monomer, based upon 100 parts by weight of acrylic monomer, i.e. alkyl acrylate monomer plus modifier monomer* (column 9, lines 40-48). Everaerts also discloses alkyl acrylate monomers of the adhesive layer can be

formed from a mixture of two independent monomers (column 5, lines 20-25).

Likewise, it is clearly apparent that the foam layer is formed from a mixture of two independent alkyl acrylate monomers. Everaerts discloses modifier monomers can be formed from a mixture of two independent monomers, basic monomer and acidic monomer (column 5, lines 40-49). Likewise, it is clearly apparent that the foam layer is formed from a mixture of two independent modifier monomers. The examiner wishes to point out the claims do not require the first and the second monomers be different. Thus, the claimed weight percent of each monomer is essentially meaningless.

Everaerts discloses a double-sided tape comprising a substrate of polyolefin having the pressure sensitive adhesive coated thereon (column 9, lines 30-35, claims 9-12). Everaerts does not disclose the substrate being a heat activated adhesive. However, it appears that Everaerts is using the same materials such as polyolefin, polyurethane and elastomers to form the substrate of the adhesive tape. It is not seen that the substrate of Everaerts would have preformed differently from the heat activated adhesive of the claimed invention. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

Everaerts discloses the pressure sensitive adhesive composition comprising 5 to 65 volume percent of hollow glass microspheres to promote the foam-like appearance of the adhesive layer (column 9, lines, 50-57). Everaerts does not specifically disclose the use of hollow glass microspheres in an amount of about 8%

by weight to about 12% by weight. Since the concentration is recognized as a result-effective variable, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such a concentration is critical or provides unexpected results. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the microsphere having the amount range instantly claimed to promote the foam-like appearance of the adhesive layer (column 9, lines, 50-57). This is in line with In re Aller, 105 USPQ 233, which holds that discovering the optimum or workable ranges involves only routine skill in the art.

With regard to claims 2-4, Everaerts discloses the pressure adhesive layer further comprising 0.05 to 0.5 % by weight of a photoinitiator and 0.05 to 1% by weight of a crosslinker (column 7, lines 41-42, column 9, lines 15-16 and column 9, line 65 et seq.) within the claimed ranges.

With regard to claims 5-8, Everaerts-136 discloses the crosslinker being a multifunctional acrylate (column 7, line 41 et seq.).

With regard to claim 9, Everaerts discloses the use of a filler in the pressure sensitive adhesive layer (column 10, line 1). However, Everaerts is silent as to an amount of filler present in the pressure sensitive adhesive layer. Varying the amount of the filler would have been recognized by one skilled in the art to improve the strength of the foam layer. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention

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was made to employ the filler having the amount instantly claimed to improve the strength of the foam layer. This is also in line with *In re Aller*, 105 USPQ 233.

4. Claims 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136) as applied to claim 1 above, in view of Everaerts et al (US 5,695,837) as evidenced by Palazzotto et al (US 5,521,227). Everaerts-136 discloses the pressure sensitive adhesive layer comprising a filler (column 9, line 65 et seq.). Everaerts-136 does not specifically disclose the filler being a fumed silica or a surfaced modified silica being used in the pressure sensitive adhesive layer. Everaerts-837 discloses the hydrophobic silica filler being used in the pressure sensitive adhesive layer (column 9, line 64). It is known in the art that the hydrophobic silica is essentially a fumed silica or a surfaced modified silica. Palazzotto relied on as evidence teaches the hydrophobic silica essentially being a fumed silica or a surfaced modified silica (column 28, line 62 et seq.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the fumed silica in the pressure sensitive adhesive layer motivated by the desire to improve the strength of the pressure sensitive adhesive layer.
5. Claims 12-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136) as evidenced by Blitstein et al (US 4,307,142). Everaerts discloses the pressure sensitive adhesive comprising isooctylacrylate and 2-ethylhexyl acrylate (column 5, lines 20-25), acrylic acid and acrylamide (column 5, lines 42-49) and glass microsphere (column 9, line 51). Everaerts does not

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specifically disclose the hollow microsphere being borosilicate glass. Blitstein is relied on as evidence that teaches borosilicate glass being a hollow microsphere. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the borosilicate glass into the pressure sensitive adhesive layer because such is a typical and readily available form of the hollow microsphere.

With regard to claims 13-15, Everaerts teaches the photoinitiator being benzoin ethyl ether (column 9, line 7). Everaerts discloses the pressure adhesive layer comprising 0.05 to 0.5 % by weight of a photoinitiator, 0.05 to 1% by weight of a crosslinker and a filler (column 7, lines 41-42, column 9, lines 15-16 and column 9, line 65 et seq.) within the claimed ranges. Everaerts is silent as to an amount of filler present in the pressure sensitive adhesive layer. Varying the amount of the filler would have been recognized by one skilled in the art to improve the strength of the foam layer. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the filler having the amount instantly claimed to improve the strength of the foam layer. This is also in line with *In re Aller*, 105 USPQ 233.

With regard to claim 19, Everaerts does not specially disclose the amount of each component in the pressure sensitive adhesive layer. Varying the amount of each component would have been recognized by one skilled in the art as dependent upon the intended use of the product. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time

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the invention was made to employ the cited monomers having the amount ranges instantly claimed motivated by the desire to provide the pressure sensitive adhesive having the ability to permanently bond to the solid acidic surfaces (column 3, lines 35-48). This is also in line with *In re Aller*, 105 USPQ 233.

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136) as evidenced by Blitstein et al (US 4,307,142), as applied to claim 12 above, in view of Everaerts et al (US 5,695,837) as evidenced by Palazzotto et al (US 5,521,227). See obviousness rational discussed in the paragraph no. 4.
7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136) as evidenced by Blitstein et al (US 4,307,142), as applied to claim 12, further in view of Mazurek et al (US 5,264,278). Everaerts fails to disclose the pressure sensitive adhesive layer comprising 1,4-butanediol diacrylate as a crosslinker. Mazurek supplies the missing features. Mazurek discloses 1,4-butanediol diacrylate incorporated into the adhesive composition as a crosslinker motivated by the desire to effect crosslinking (column 11, line 43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated 1,4-butanediol diacrylate into the pressure sensitive adhesive layer motivated by the desire to effect crosslinking.
8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136) as applied to claim 1, further in view of Mazurek et al (US 5,264,278). Everaerts fails to disclose the pressure sensitive adhesive comprising a

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coloring agent. Mazurek supplies the missing features. Mazurek discloses the pressure sensitive adhesive comprising a dye motivated by the desire to colorize the adhesive tape (column 12, line 41). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a dye into the pressure sensitive adhesive layer motivated by the desire to colorize the adhesive tape.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al (US 5,612,136) as evidenced by Blitstein et al (US 4,307,142), as applied to claim 12, further in view of Everaerts et al (US 5,695,837) and Mazurek et al (US 5,264,278), as evidenced by Palazzotto et al (US 5,521,227). Everaerts-136 discloses the pressure sensitive adhesive layer comprising 0.05 to 0.5 % by weight of benzoin ethyl ether, 0.05 to 1% by weight of a crosslinker and a filler (column 7, lines 41-42, column 9, lines 15-16 and column 10, line 1). Everaerts-136 does not specifically disclose the filler being a fumed silica being used in the pressure sensitive adhesive layer. Everaerts-837 discloses the hydrophobic silica filler being used in the pressure sensitive adhesive layer (column 9, line 64). It is known in the art that the hydrophobic silica is essentially a fumed silica. Palazzotto relied on as evidence teaches the hydrophobic silica essentially being a fumed silica (column 28, line 62 et seq.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the fumed silica in the pressure sensitive adhesive layer motivated by the desire to improve the strength of the pressure sensitive adhesive layer. Everaerts-136 is silent as to an amount of

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filler present in the pressure sensitive adhesive layer. Varying the amount of the filler would have been recognized by one skilled in the art to improve the strength of the foam layer. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the filler having the amount instantly claimed to improve the strength of the foam layer. This is also in line with *In re Aller*, 105 USPQ 233.

Everaerts-136 fails to disclose the pressure sensitive adhesive layer comprising 1,4-butanediol diacrylate as a crosslinker. Mazurek supplies the missing features. Mazurek discloses 1,4-butanediol diacrylate incorporated into the adhesive composition motivated by the desire to effect crosslinking (column 11, line 43). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated 1,4-butanediol diacrylate into the pressure sensitive adhesive layer motivated by the desire to effect crosslinking.

Response to Arguments

10. The art rejections have been overcome by the present argument.

11. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

12. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The inclusion of a layer of pressure sensitive adhesive being disposed on the other side of the backing opposite the layer of heat-

activated adhesive renders the claimed invention patentable over the prior art. There is no suggestion, teaching or motivation to add the layer of pressure sensitive adhesive on the other side of the pressure sensitive adhesive layer opposite the substrate of the adhesive tape disclosed in Eeraerts'136.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0994.

HV

Hai Vo
TC 1700